Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A spray device, comprising a means for generating an air stream having a predetermined velocity and a nozzle unit with at least one inlet for the introduction therein of a liquid and a separate set of nozzles corresponding to each of said inlets for the discharge of liquid therefrom, wherein said nozzle unit is configured such that the pressure at which a liquid is injected to each nozzle of a corresponding set of nozzles is essentially uniform, said nozzle unit fixedly attached to the central portion of said air stream generating means, such that said discharged liquid is entrainable by said air stream whereby to produce a mist stream having a thickness considerably less than the thickness of said air stream and capable of being propelled to a predetermined location, said mist stream having a measurable and controllable lateral dimension at said predetermined location.

2. (original) Spray device of claim 1, wherein the nozzle unit possesses a low profile.

3. (original) Spray device of claim 1, wherein the air stream generating means is a fan having blades and a guard grille, the nozzle unit being centrally mounted on the downstream side of the grille and the blades defining a blade diameter.

4. (original) Spray device of claim 3, wherein the nozzle unit comprises one or more nozzles essentially symmetrically positioned with respect to the center of the fan blades.

5. (original) Spray device of claim 3, wherein the nozzle unit is essentially concentric with the fan blades.

6. (original) Spray device of claim 3, wherein the inclination of the fan with respect to a fan support is adjustable, the direction of the mist stream thereby being adjustable.

7. (Currently Amended) Spray device of claim 1 wherein the pressure of a liquid introduced into the nozzle unit ranges from 3 to 6 atmospheres.

8. (original) Spray device of claim 1, further comprising a check valve, said check valve being installed within each inlet to the nozzle unit.

9. (original) Spray device of claim 1, wherein the nozzle unit is hollow with a substantially cylindrical, conical or pyramidal configuration.

10. (original) Spray device of claim 1, wherein the nozzle unit is provided with at least one partition, thereby defining two adjacent liquid circulation chambers, wherein the liquid introduced through a corresponding inlet circulates through a corresponding chamber and is discharged through a corresponding set of nozzles.

11. (original) Spray device of claim 1, wherein the length of the nozzle unit is greater than its outer diameter and a flange is used to mount the nozzle unit to the grille of the fan.

12. (original) Spray device of claim 8, wherein the periphery of the nozzle unit are provided with a plurality of apertures, a nozzle being insertable within each aperture.

13. (original) Spray device of claim 11, wherein each nozzle is equidistantly and circumferentially spaced from an adjacent nozzle, the maximum radial spacing between nozzles defining an effective diameter.

14. (original) Spray device of claim 12, wherein the effective diameter of the nozzles is less than the blade diameter of the fan.

15. (original) Spray device of claim 11, wherein the spray angle of each nozzle with respect to a longitudinal axis of the nozzle unit ranges from 0-75 degrees.

16. (original) Spray device of claim 14, wherein the spray angle is substantially 45 degrees.

17. (original) Spray device of claim 8, wherein a front face of the nozzle unit is formed with an aperture and a nozzle is insertable within said aperture, such that the spray angle of the nozzle is approximately 0 degrees with respect to the longitudinal axis of the nozzle unit.

18. (original) Spray device of claim 8, wherein the capacity of each nozzle ranges from 5-50 liter/hr.

19. (original) Spray device of claim 8, wherein each nozzle is removable and replaceable.

20. (original) Spray device of claim 1, wherein the at least one liquid inlet is regulated by a control valve.

21. (original) Spray device of claim 1, wherein each liquid inlet is regulated by a control valve.

22. (Currently Amended) Spray device of claim ~~19~~ 21, further comprising a timer, said timer being capable of communicating with an actuator of the control valve, whereby to maintain a cyclic operation of the spray device.

23. (Currently Amended) Spray device of claim ~~19~~ 21, further comprising a controller and sensor, said controller operative to regulate the control valve in response to a value relating to ambient conditions sensed by said sensor.

24. (Currently Amended) Spray device of claim ~~22~~ 23, wherein the sensor is selected from the group of temperature sensor, humidity sensor, wind direction sensor and wind speed sensor.

25. (Currently Amended) Spray device of claim ~~22~~ 23, wherein the controller is operative to control the operation of the air stream generating means.

26. (original) Spray device of claim 9, further comprising a means for adjusting the radial position of the spray device relative to a vertical post.

27. (original) Spray device of claim 26, wherein the radial position adjusting means comprises a swingable cross member, a first end of said cross member coupled to a fan support and a second end of said cross member coupled to a shaft assembly, said shaft assembly being mounted to a vertical post., a radial position of the spray device being adjusted upon angular displacement of the cross member.

28. (original) Spray device of claim 27, wherein the cross member is swingable from a first to a second radial position by means of a pressure differential which is produced between an outlet and inlet of the fan, upon generation of an air stream by the fan.

29. (original) Spray device of claim 28, wherein the cross member is swingable from the second to first radial position by means of gravity upon cessation of the air stream.

30. (original) Spray device of claim 29, wherein a shaft of the shaft assembly is inclined with respect to a vertical axis of the post, such that the first end of the cross member is higher than the second end at the second radial position, the cross member being swingable from the second to first radial position by means of gravity acting upon the first end.

31. (original) Spray device of claim 29, wherein the angular displacement from the first to second radial position and from the second to first radial position is adjustable.

32. (original) A network of spray devices, each spray device being the spray device of claim 1.

33. (original) Network of claim 32, wherein the inlet to the network is regulated by a control valve.

34. (original) Network of claim 32, wherein the inlet to each spray device is regulated by a control valve.

35. (original) Network of claim 32, wherein the controller regulates a plurality of control valves.

36. (Currently Amended) A method for directing a spray to a target location, comprising the steps of: generating an air stream having a predetermined velocity, generating a spray of liquid, such that said spray of liquid is injected into said air stream and entrained thereby, whereby to produce a mist stream having a measurable and controllable thickness considerably less than the thickness of said air stream; and allowing said mist stream to be propelled by said air stream for a predetermined length so that at said target location the lateral dimension of said mist stream is substantially of a predetermined value.

37. (original) Method of claim 36, wherein the air stream is generated by means of a fan having a grille and fan blades.

38. (Currently Amended) Method of claim 36, wherein the pressure of a liquid introduced into the nozzle unit ranges from 3 to 6 atmospheres.

39. (original) Method of claim 36, wherein the spray of liquid is generated by allowing a liquid having a sufficient flow rate to flow through a conduit and to be introduced into a nozzle unit which is mounted onto the grille of the fan, whereupon the liquid is discharged as a spray through each of a set of nozzles provided with said nozzle unit.

40. (original) Method of claim 36, wherein each nozzle is disposed at a spray angle and sufficiently spaced from an adjacent nozzle to define an effective diameter of the nozzles.

41. (original) Method of claim 36, wherein the discharges from each of the nozzles converge slightly downstream from the nozzle unit.

42. (original) Method of claim 36, wherein the lateral dimension of the mist stream is controlled by modifying the value of at least one parameter selected from the group of effective diameter of the nozzles, distance to the target location, spray angle, diameter of fan blades, velocity of air stream and density of the liquid that is propelled by the air stream.

43. (original) Method of claim 36, wherein the concentration of the mist stream is controlled by regulating the flow rate of the liquid to be sprayed and by changing the outlet size of each nozzle.

44. (original) Method of claim 36, further comprising the step of adjusting a radial position of the spray device relative to a vertical post.

45. (original) Method of claim 44, wherein the spray of liquid is injected into the air stream after the radial position of the spray device is adjusted.

46. (original) Method of claim 44, wherein the radial position of the spray device is adjusted by providing a cross member, a first end of which is coupled to a fan support and a second end of which is coupled to a shaft assembly mounted to a vertical post., and by swinging said cross member about said shaft assembly, a radial position of the spray device being adjusted upon angular displacement of the cross member.

47. (original) Method of claim 46, wherein the cross member is swung from a first to a second radial position by means of a pressure differential which is produced between an outlet and inlet of the fan, upon generation of an air stream by the fan.

48. (original) Method of claim 47, wherein the cross member is swung from the second to first radial position by means of gravity upon cessation of the air stream.

49. (original) Method of claim 48, further comprising limiting the angular displacement from the first to second radial position and from the second to first radial position.

50. (original) Method of claim 36, wherein the mist stream is used to cool overheated animals.

51. (original) Method of claim 36, wherein the mist stream is used to wash cars.

52. (original) Method of claim 36, wherein the mist stream is used to moisten textile fibers to be processed.

53. (Currently Amended) Method of claim 36, wherein the mist stream is used to provide a fragrance to a room.

54. (original) A method of washing a body, comprising the following steps:

a) generating an air stream having a predetermined velocity;
b) providing a nozzle unit with a first inlet and a second inlet for the introduction therein of water and of a chemical solution, respectively, and a first and second sets of nozzles corresponding to said first and second inlets, water and said chemical solution being capable of circulating in separate chambers within said nozzle unit;
c) allowing water to flow into said first inlet;

d) allowing a spray of water to be discharged from said first set of nozzles, such that said spray of water is injected into said air stream and entrained thereby, whereby to produce a first mist stream having a measurable and controllable lateral dimension and allowing said mist stream to be propelled by said air stream for a predetermined length so that at said target location said first mist stream is capable of moistening dirt particles attached to the surface of a body;

e) after a first predetermined period of time, allowing said chemical solution to flow into said second inlet;

f) allowing a spray of chemical solution to be discharged from said second set of nozzles, such that said spray of chemical solution, together with said spray of water, is injected into said air stream and entrained thereby, whereby to produce a second mist stream having a measurable and controllable lateral dimension and allowing said second mist stream to be propelled by said air stream for a predetermined length so that at said target location said second mist stream is capable of spraying said body and producing a foam thereon;

g) after a second predetermined period of time, preventing flow of said air stream, flow of water into said first inlet and of said chemical solution into said second inlet;

h) after a third predetermined period of time, repeating steps a)-d), water being introduced into said first inlet at a predetermined pressure;

i) after a fourth predetermined period of time, preventing flow of water; and

j) after a fifth predetermined period of time, transporting the washed body.

55. (original) Method of claim 54, wherein the body is that of a motor vehicle.

56. (original) Method of claim 54, wherein the body is an animal body.

57. (original) Method of claim 54, wherein the first predetermined period of time is approximately 1 minute, the second predetermined period of time is approximately 0.5 minute, the third predetermined period of time is approximately 5 minutes, the fourth predetermined period of time is approximately 2 minutes and the fifth predetermined period of time is approximately five minutes.

58. (original) Method of claim 54, wherein the predetermined pressure is approximately 7 atmospheres.

59. (original) Method of claim 54, further comprising, after step b), adjusting a radial position of a spray device comprising the nozzle unit relative to a vertical post.

60. (original) Method of claim 54, wherein water flows into the first inlet after the radial position of the spray device is adjusted.

61. (original) Method of claim 54, further comprising, after step i), providing said nozzle unit with a third inlet and a corresponding third set of nozzles, allowing a spray of wax to be discharged from said third set of nozzles, and after a sixth predetermined period of time, preventing flow of wax.

62. (original) Method of claim 54, wherein the sixth predetermined period of time is approximately 1 minute.

63. (original) Method of claim 54, wherein the chemical solution is an aqueous solution comprising a compound selected from the group consisting of surfactant, aliphatic alcohol, aminoalcohol, alkanol amide, sodium hydroxide, glycol ester, or a mixture thereof.

64. (original) Method of claim 54, wherein the chemical solution comprises anionic surfactant, ethanol amine and butyl glycol.

65. (original) Method of claim 63, wherein the concentration of the surfactant ranges from 0.05 to 2 wt%, of alkanol amide ranges from 0.1 to 1 wt%, of ethanol amine ranges from 0.1 to 1 wt%, of sodium hydroxide ranges from 0.1 to 1 wt%, and of glycol ester from 0.5 to 5 wt%.

66. (original) Method of claim 54, wherein the body is washed by means of longitudinally displaceable spray devices.

67. (original) Method of claim 66, wherein the body is washed by two lower spray devices having a predetermined transversal spacing therefrom and by an elevated spray device.

68. (original) Method of claim 66, wherein each spray device is guided along a corresponding track and is displaced a length equal to at least the length of the body during a time interval equal to a corresponding predetermined period of time.

69. (original) Method of claim 54, wherein the body is washed by a plurality of stationary spray devices.

70. (original) Method of claim 69, wherein each spray device is disposed at a predetermined transversal spacing from the body.

71. (original) Method of claim 69, wherein the number of spray devices corresponds to the length of the body.

72. (original) Method for cooling cattle, particularly cows, distributed in an orderly configuration, particularly in corrals and more particularly in a shed, which comprises the following steps:

a) providing a plurality of sprayers;

b) distributing said sprayers in a configuration corresponding to said configuration of the cattle;

c) concurrently actuating said sprayers to generate water sprays, each of them directed substantially to at least one cow body;

d) sensing the direction and optionally the speed and/or other relevant parameters, if any, of the wind;

e) concurrently changing the direction of the water sprays according to the direction and optionally the speed and/or other relevant parameters, if any, of the wind, in such a way that each spray will still be directed substantially to at least one cow body.

73. (original) Method according to claim 72, wherein the cattle are cows.

74. (original) Method according to claim 72, further comprising transmitting the direction and speed of the wind and/or other relevant parameters, if any, of the wind to a computer which outputs the calculated change of the direction of the water sprays about a vertical axis.

75. (original) Apparatus for cooling cattle, particularly cows, distributed in an orderly configuration, particularly in rows and more particularly in a shed, which comprises:

I – a plurality of sprayers, arranged in a configuration corresponding to said orderly configuration of the cattle;

II – actuating means for concurrently actuating and concurrently stopping all of said sprayers;

III – wind sensor means for sensing the direction and optionally the speed and/or other relevant parameters, if any, of the wind;

IV – kinematic connecting means for concurrently controlling the direction of the water sprays generated by said water spray generators; and

V – means for actuating said kinematic means according to the direction and optionally the speed and/or other relevant parameters, if any, of the wind sensed by said sensing means.

76. (original) Apparatus according to claim 75, wherein the kinematic means connect each sprayer to the next, and concurrently changes or adjusts, if and when needed, the direction of the water sprays generated by them.

77. (original) Apparatus according to claim 75, wherein the kinematic means changes or adjusts the direction of the water sprays by angularly displacing the sprayers about a substantially vertical axis.

78. (original) Apparatus according to claim 75, wherein each sprayer preferably comprises a fan having blades defining a blade diameter, and a guard grille, and comprises a nozzle unit for feeding water from a feed conduit, which is being centrally mounted on the downstream side of the grille and the blades.

79. (original) Apparatus according to claim 75, wherein each sprayer is pivotally displaceable about a vertical axis.

80. (original) Apparatus according to claim 75, further comprising a computer which inputs the direction and speed of the wind and/or other relevant parameters, if any, sensed by the wind sensor, and outputs the calculated rotation of the sprayers about a vertical axis required to maintain the desired direction and range of the water sprays.

81. (original) Apparatus according to claim 75, wherein the other relevant wind parameters include the humidity of the wind and its temperature.

82. (original) Apparatus according to claim 75, wherein each sprayer is mounted on a support solid with a vertical shaft, said shaft being rotatably mounted in a sleeve attached to a static element.

83. (original) Apparatus according to claim 75, wherein the vertical shaft carries a first gear wheel and a second gear wheel.

84. (original) Apparatus according to claim 75, further comprising a control station for controlling the direction of the sprayers.

85. (original) Apparatus according to claim 75, wherein the kinematic connecting means for concurrently controlling the direction of the sprayers comprises, for each sprayer, a two-way flexible member which comprises two legs connected at both their ends and passing around the vertical shaft of each sprayer.

86. (original) Apparatus according to claim 85, comprising a control station for controlling the direction of the sprayers, and wherein the first flexible member, that passes around the vertical shaft of the first sprayer, also passes around a support located at the control station.

87. (original) Apparatus according to claim 85, wherein each flexible member, other than the first, passes around the vertical shafts of two adjacent sprayers.

88. (original) Apparatus according to claim 85, further comprising means for displacing the first flexible member along itself from the control station, and transmission means for translating the displacements of said flexible member about a vertical axis.

89. (original) Apparatus according to claim 85, further comprising transmission means for transmitting rotation from a preceding sprayer to the next.

90. (original) Apparatus according to claim 89, wherein the transmission means comprises a first gear wheel rotatable with the preceding sprayer, a gearing carried by the flexible member that engages both sprayers, which gearing meshes with said first gear wheel, and a second gear wheel rotatable with the next sprayer, said gearing also meshing with said second gear wheel.

91. (original) Apparatus according to claim 75, further comprising means for rotating each sprayer about a horizontal axis.

92. (original) Apparatus according to claim 75, further comprising means causing and controlling the intermittent cooling of cows.

93. (original) Apparatus according to claim 75, wherein the sprayers are aligned successively along at least two segments forming an angle to one another and a sprayer or a vertical shaft having two gear wheels keyed thereto is located at the junction of said two segments.

94. (original) Apparatus according to claim 75, wherein the sprayers are aligned successively along at least two segments at different levels from one another, which apparatus further comprises a slanted flexible member transmitting angular displacement from the last sprayer of one segment to the first sprayer of the following segment, a first slanted shaft rotatably connected to said last sprayer, a second slanted shaft rotatably connected to said first sprayer, said slanted flexible member connecting said first and said second slanted shaft.

95. (original) Apparatus according to claim 94, wherein the last sprayer of one segment to the first sprayer of the following segment are provided each with a vertical shaft having an additional gear wheel keyed thereto, the first slanted shaft is rotatably connected to said last sprayer by a gear wheel keyed to said first slanted shaft and meshing with the additional gear wheel keyed to the vertical shaft of said last sprayer, and the second slanted shaft is rotatably connected to said first sprayer by a gear wheel keyed to the second slanted shaft and meshing with the additional gear wheel keyed to the vertical shaft of said first sprayer.

96. (original) Apparatus according to claim 94, wherein the control station comprises sensor means for sensing the direction and speed of the wind and processing means for calculating from the sensed direction and speed, and optionally from other wind parameters, the desired angular displacement of the sprayers about substantially vertical axes.

97. (New) A spray device, comprising:

a) a fan with blades and a guard grill for generating an air stream having a predetermined velocity; and

b) a nozzle unit centrally mounted on the downstream side of the grill, said nozzle unit comprising:

i. a hollow body;

ii. a periphery of said body in which are formed first and second inlets for the introduction therein of first and second liquids, respectively;

iii. a partition fixed within the interior of said body which defines first and second adjacent liquid circulation chambers;

iv. a face of said body on the downstream side thereof in which are formed a plurality of apertures; and

v. a plurality of nozzles, a nozzle being insertable within each of said apertures, wherein said plurality of nozzles are divided into first and second sets, said first and second sets being in communication with said first and second liquid circulation chambers, respectively,

wherein said first and second liquids introduced through said first and second inlets, respectively, circulate through said first and second liquid circulation chambers, respectively, and are discharged through said first and second set of nozzles, respectively,

wherein the liquid discharged by said first and second set of nozzles is entrainable by said air stream whereby to produce a singular mist stream capable of being propelled to a predetermined location, said mist stream having a measurable and controllable lateral dimension at said predetermined location.